

In the Claims:

1           1. A hydroforming system comprising:  
2            a dual conical tube formed from a blank  
3 comprising a first end, a second end and a central  
4 portion positioned between said first and said second  
5 ends, said central portion having a smaller cross  
6 sectional area than said first and said second ends; and  
7            a shaping die adapted to receive said dual  
8 conical tube, said shaping die subject to pressurize  
9 such that said blank substantially approximates a shape  
10 of said shaping die.

1           2. The system of claim 1, wherein said blank  
2 is substantially bow tie shaped.

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2           3. The system of claim 1, further comprising  
3 at least one reinforcement coupled to said blank.

1           4. The system of claim 1, wherein said  
2 shaping die is coupled to a forming system.

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2           5. The system of claim 4, wherein said  
3 forming system comprises a hydroforming press.

1  
2           6. The system of claim 1, wherein said dual  
3 conical tube is further adapted to bend through a  
4 bending process prior to insertion in said shaping die.

1  
2           7. The system of claim 1, wherein said shape  
3 of said shaping die substantially conforms to a shape of  
4 at least one automobile body component.

1               8. A hydroforming system comprising:  
2                a dual conical tube formed from a  
3 substantially bow tie shaped blank, said dual conical  
4 tube comprising a first end, a second end and a central  
5 portion positioned between said first and said second  
6 ends, said central portion having a smaller cross  
7 sectional area than said first and said second ends; and  
8                a shaping die adapted to receive said dual  
9 conical tube, said shaping die subject to pressurize  
10 such that said dual conical tube substantially  
11 approximates a shape of said shaping die.

1               9. The system of claim 8, further comprising  
2 at least one reinforcement coupled to said substantially  
3 bow tie shaped blank.

1               10. The system of claim 8, wherein said  
2 shaping die is coupled to a hydroform press.

11. The system of claim 8, wherein said dual  
conical tube is further adapted to bend through a  
bending process prior to insertion in said shaping die.

1               12. The system of claim 8, wherein said shape  
2 of said shaping die substantially conforms to a shape of  
3 at least one automobile body component.

1               13. A method for molding a part comprising:  
2               rolling a substantially bow tie shaped blank  
3     lengthwise to form substantially a dual conical tube  
4     shape;

5               joining seams of said substantially bow tie  
6     shaped blank;

7               inserting said substantially bow tie shaped  
8     blank in a metal forming device comprising a shaping  
9     die; and

10              substantially forming through pressurization  
11     said substantially bow tie shaped blank to an  
12     approximate shape of said shaping die.

1               14. The method of claim 13, further comprising  
2     reinforcing said bow tie shaped blank prior to the step  
3     of inserting.

1               15. The method of claim 13, wherein metal  
2     forming comprises hydroforming.

1               16. The method of claim 15, further comprising  
2     bending said substantially bow tie shaped blank prior to  
3     the step of hydroforming.

1               17. The method of claim 15, wherein  
2     hydroforming includes pressurizing said substantially  
3     bow tie shaped blank.

1               18. The method of claim 15, wherein  
2     hydroforming includes forming said bow tie shaped  
3     blank to a die.

1               19. The method of claim 13, wherein metal  
2 forming comprises hot-metal gas forming.

1               20. A part formed according to the method of  
2 claim 13 comprising:  
3               a first end;  
4               a second end;  
5               and a central portion positioned between  
6 said first and said second ends, said central portion  
7 having a smaller cross sectional area than said first  
8 and said second ends.